



AXTRA3D



CASE STUDY

PRINOA DENTAL

Transforming Dental Production with PRINOA Dental

20,000
PARTS

2,000
PRINT
JOBS

1,000,000
LAYERS



Transforming Dental Production with Prinoa Dental

Prinoa Dental, a premier dental production center based in Solingen, achieved remarkable milestones last year: executing over 2,000 print jobs, producing more than 1 million layers, and manufacturing over 20,000 parts in just 9 months. These achievements were powered by the integration of Aextra3D's Lumia X1D, delivering a 60% boost versus their original leased printer in productivity and setting new benchmarks in the dental industry.





The Challenge: Meeting Growing Demand with Limited Capacity

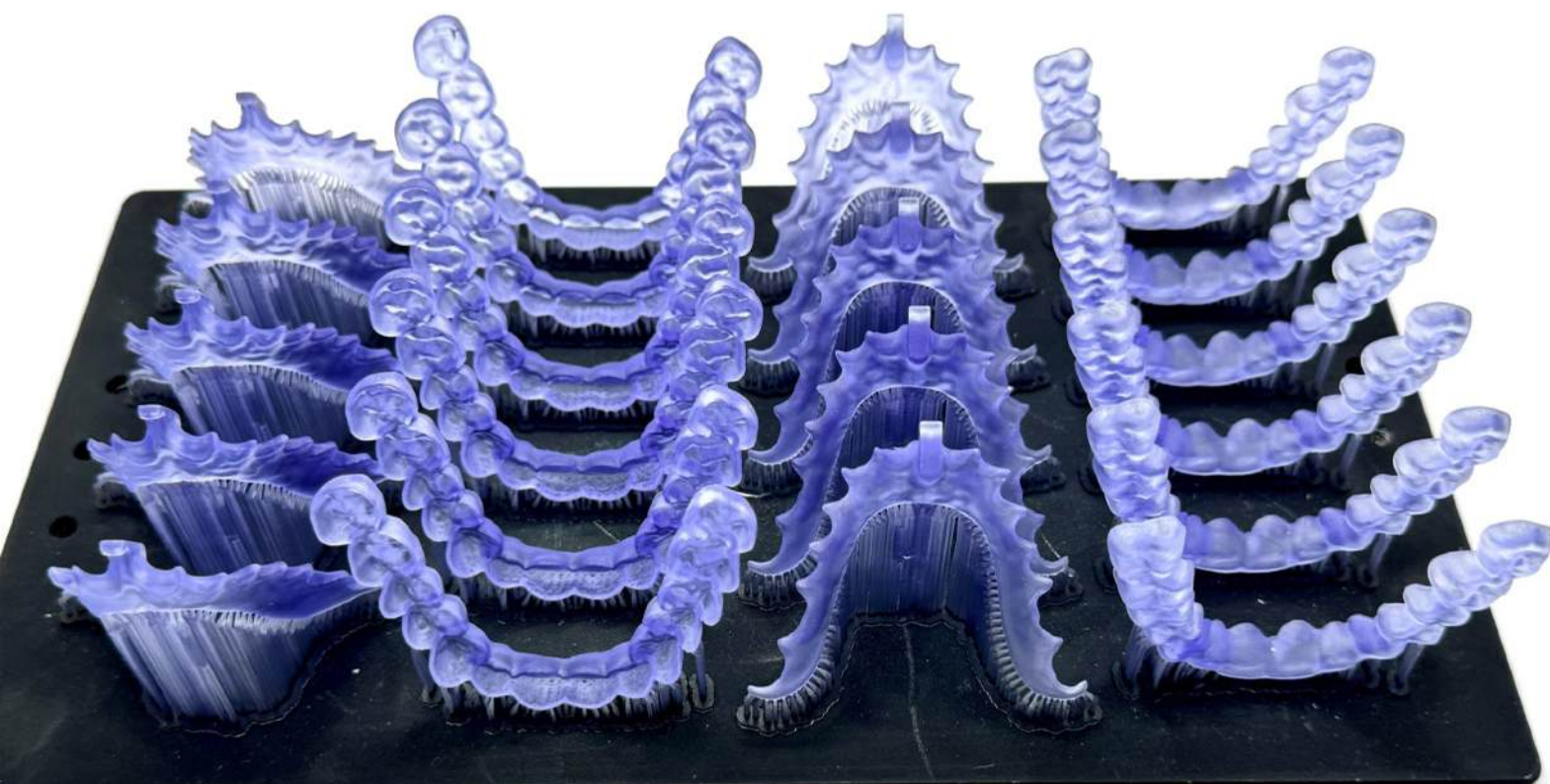
As demand for its services steadily rose, Prinoa Dental faced significant challenges with its existing 3D printing setup. Operating at near-full capacity, the system's size and speed limitations hindered the company's ability to meet increasing customer needs efficiently. Prinoa Dental had to decide: should they lease another printer, keep the existing one or invest in a more innovative, cost-effective, and scalable solution that further enhanced their business model?



The Solution: Adopting the Aextra3D Lumia X1D

Prinoa Dental's decision to adopt the Aextra3D Lumia X1D proved transformative. The advanced capabilities of the Lumia X1D significantly reduced production times and increased throughput, enabling the company to respond rapidly to customer orders. Impressively, 99% of orders—including dental models, orthodontic models, splints, dentures, try-ins, crowns & bridges, and aligner models—were delivered on the same day, a feat that underscores the printer's speed and efficiency. This enhanced production capacity has redefined industry expectations for performance and reliability.

In terms of print time, the Lumia X1D significantly outperformed Prinoa's existing 3D printing systems, reducing production time by half. This improvement doubled Prinoa's daily output, increasing print jobs from a maximum of 9 to as many as 18 per day. Additionally, the Lumia X1D expanded the build platform capacity from 6 with the original leased system to 10 parts per run. With an overall productivity increase of 60%, transitioning to the Lumia X1D was an obvious choice for Prinoa.





Printer Utilization

	Leased Printer	Axtra3D's Lumia.X1-D
Models Per Day (10-hour workday)	40	40
Printing Time (50 microns)	120 mins	54 mins
Average Models Per Build	6	10
Utilization	117%	31%
Printing Hours per Year	3220	859
Printers Needed	2	1
Cost Per Part Reduction		50%



Optimized Workflow and Greater Material Flexibility

Before integrating the Lumia X1D, Prinoa Dental was running nearly three shifts per day to keep up with demand, as inefficient printing times and platform loading slowed production. With the Lumia X1D's superior throughput, the company was able to reduce this to just two shifts while still increasing overall output. This efficiency boost not only streamlined the workflow but also allowed Prinoa to deliver parts on the same day with greater consistency.

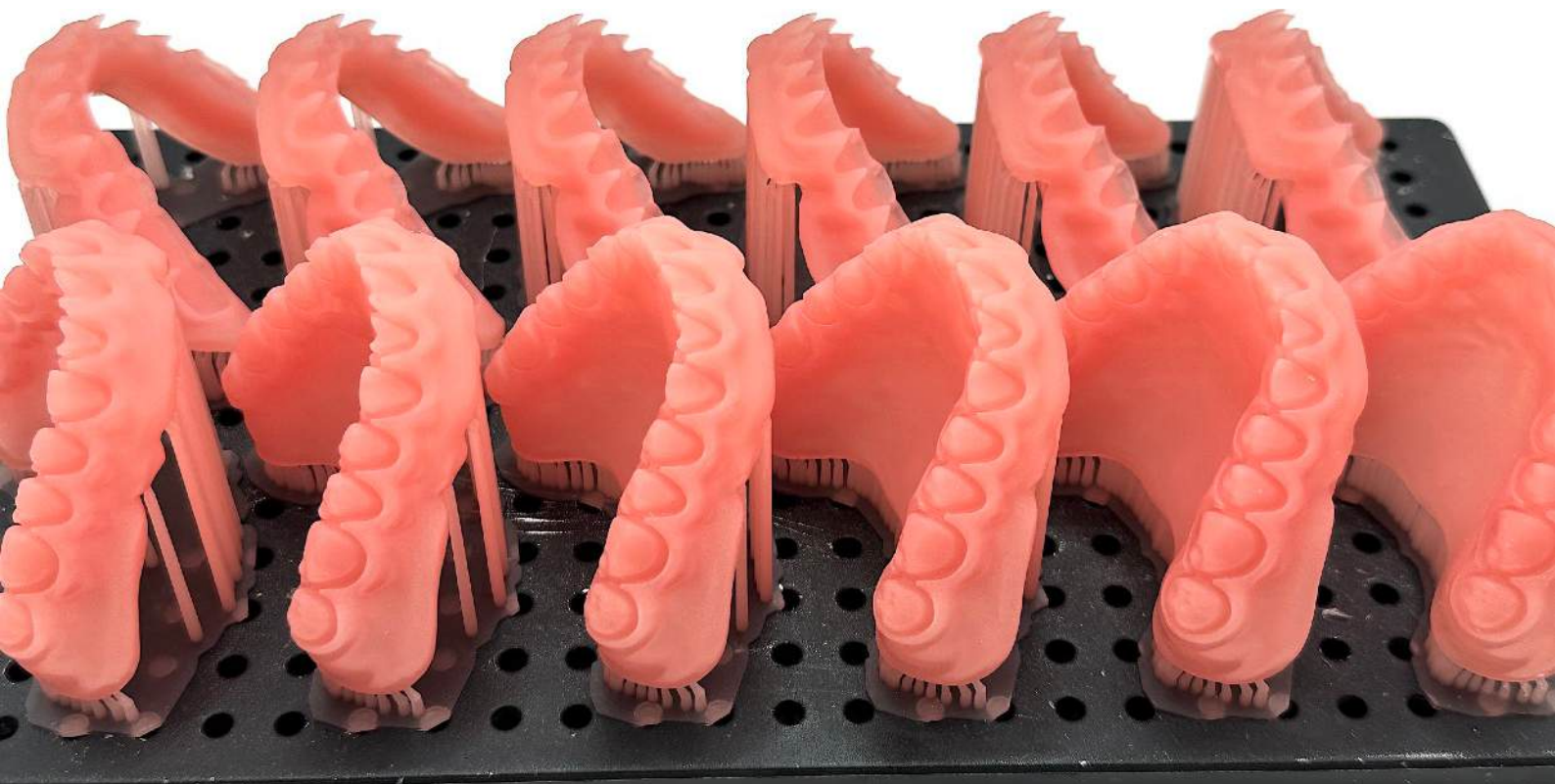
Additionally, faster production cycles introduced more flexibility in material changes. With reduced downtime and improved operational efficiency, Prinoa Dental expanded its material offerings, giving customers access to a broader range of high-performance dental solutions.





Lower Costs Through Strategic Investment

By purchasing the Aextra3D Lumia X1D instead of leasing their existing machine, Prinoa Dental cut production costs per part by 50% compared to the leased printer. With fewer printing hours required per year and reduced employee costs due to fewer prints, they also achieved higher machine utilization, further driving down total costs. This strategic investment delivered a compelling return, combining heightened productivity with long-term cost savings.





The Results: Enhanced Efficiency and Competitive Advantage

With the Lumia X1D, Prinoa Dental increased production capacity by an impressive 60%. Orders that previously required multiple days are now fulfilled within hours. This speed not only bolstered customer satisfaction but also provided Prinoa Dental with a distinct edge in a competitive market.

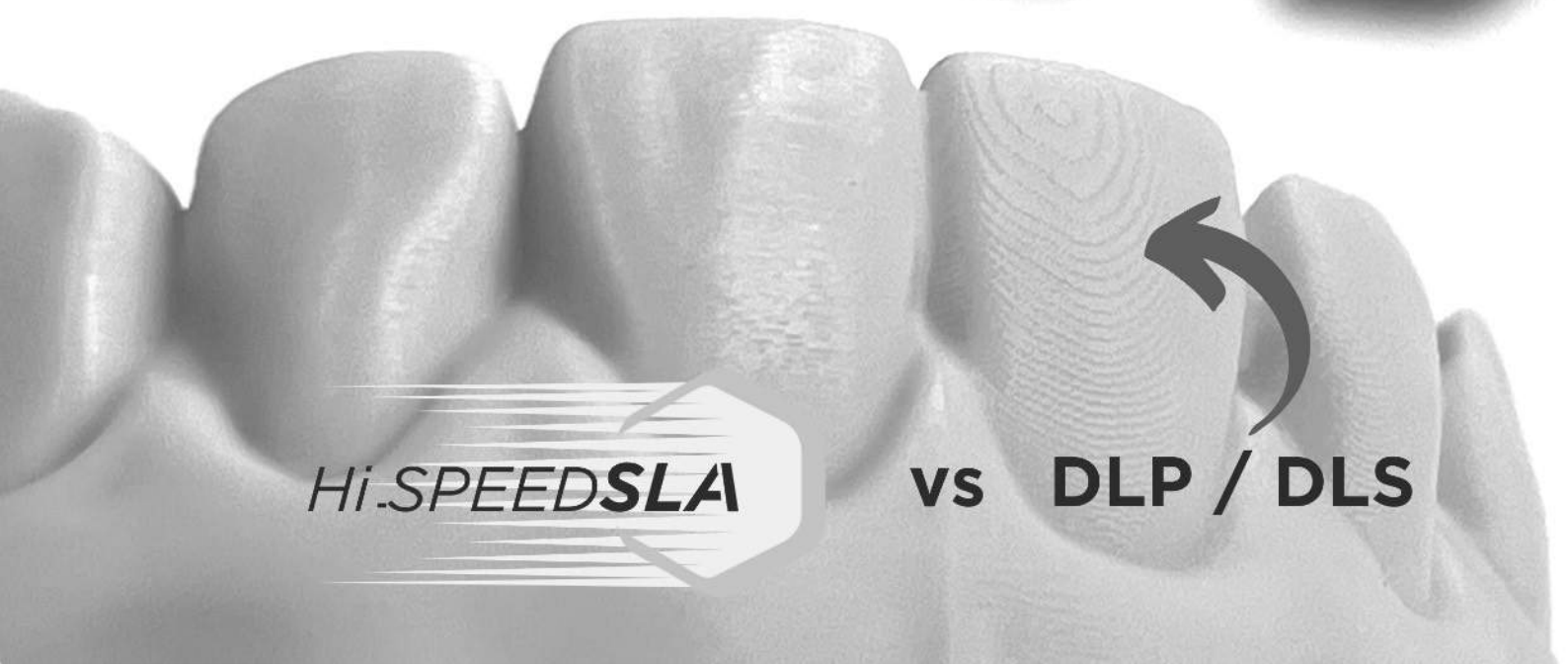




The Conclusion: Redefining Modern Dental Production

Integrating the Aextra3D Lumia X1D has empowered Prinoa Dental to manage rising demand while laying a strong foundation for future growth. The printer's unique combination of speed, scalability, and cost-effectiveness makes it an essential asset for forward-thinking dental production centers. Prinoa Dental's success story highlights the transformative potential of cutting-edge 3D printing technologies and invites others in the dental industry to explore the groundbreaking capabilities of the Aextra3D Lumia X1D.

RA3D



*Hi-SPEED***SLA**

vs DLP / DLS